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Cooperative **ECONOMIC INSECT REPORT**

Issued by

PLANT PROTECTION DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PROTECTION DIVISION

ECONOMIC INSECT SURVEY AND DETECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

A WHITEFLY heavy on Bermuda grass seed fields in Arizona. (p. 772).

SAN JOSE SCALE heavy on apple trees in California and Maryland. (p. 773).

CITRUS RUST MITE infestation on Florida citrus heaviest for October in 19 years of record. (p. 773).

SOUTHERN PINE BEETLE surveys indicate potential for severe timber loss in Mississippi. (p. 774).

BLACK TURPENTINE BEETLE heavy on 96,000-acre Sandhills State Forest in South Carolina. (p. 774).

VARIABLE OAK LEAF CATERPILLAR and other defoliators caused moderate to heavy defoliation on 1.5 million acres of hardwoods in Arkansas. (p. 774).

Detection

New State records include an OTITID FLY from Arizona (p. 777), RED-BACKED CUTWORM from California (p. 777), BEET ARMYWORM from North Carolina (p. 772); a CYDNID BUG (p. 772), an ENCYRTID WASP (p. 775), a PYRALID MOTH (p. 775). SPRUCE BUD SCALE (p. 774), and a WEEVIL (p. 774) from Oregon.

For new county and island records see page 777.

Reports in this issue are for week ending November 6 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING NOVEMBER 9

HIGHLIGHTS: Heavy rain fell along the Pacific coast from Washington to northern California.

PRECIPITATION: Snow fell along the eastern slopes of the central Rocky Mountains and the northern Great Plains early in the week, while rain or drizzle fell from the central Great Plains to the upper Great Lakes and showers from the upper Ohio River Valley to the middle Atlantic States. Midweek brought heavy snow to the middle Appalachians early Thursday morning. Montebello and Hot Springs, both in Virginia, measured 13 and 9 inches respectively. Washington, D.C., received 2.44 inches of rain Wednesday afternoon and evening. Thursday was wet in New England but pleasant dry weather covered most of the rest of the Nation. Weekend rain fell in the Far West while light snow mixed with cold rain fell in the central Rocky Mountains and the western edge of the central Great Plains. Showers fell from southern Minnesota to Missouri Sunday afternoon and evening.

TEMPERATURE: Cold air from the north penetrated deep into the interior of the Nation early in the week. Subfreezing temperatures covered most of western Texas Wednesday morning. San Antonio registered 32° Friday morning. Birmingham, Alabama, registered 31° on Tuesday and Wednesday, and 32° on Friday. The lowest temperature at Tallahassee, Florida, on Friday was 35°, the same as the minimums at Detroit, Michigan and Toledo, Ohio. Afternoon temperatures in the Deep South remained in the 50's Wednesday afternoon except in the Florida Peninsula where the 60's were common in the north and 70's in the south. Maximums over the West ranged mostly from the 50's in the north to the 80's in the southwestern deserts. Last week was the coldest week of the season in the Deep South. A warming trend began in the West late in the week. The Far West averaged warmer than normal. Much of the South averaged 3-8° cooler than normal. (Summary supplied by Environmental Data Service, ESSA).

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ASTER LEAFHOPPER (Macrosteles fascifrons) - WISCONSIN - Averaged 17 per 100 sweeps on rye in southern Sauk County; 75 percent of population females. (Wis. Ins. Sur.).

CORN EARWORM (Heliothis zea) - ARKANSAS - Pod damage noticeable on soybeans ready to harvest. Observations indicate that recommended treatment level satisfactory. (Boyer). KANSAS - Average per 10 sweeps as follows: 0.5 in field of 8-inch alfalfa in Wabaunsee County; zero in Riley and Cloud Counties; 1 in field of 7-inch red clover in Shawnee County. (Bell).

CORN LEAF APHID (Rhopalosiphum maidis) - NEW MEXICO - Generally light on young barley in Chaves County. (Mathews). KANSAS - Averaged 11 per linear foot in field of 6-inch sown wheat in Washington County. (Bell). WISCONSIN - Alates common on rye, no nymphs. (Wis. Ins. Sur.).

GREENBUG (Schizaphis graminum) - KANSAS - Averaged 38 per square foot in field of 9-inch volunteer wheat in Riley County. Counts per drill row as follows: Up to 0.5 in 2 fields of wheat in Clay County, 4 in 6-inch wheat in Washington County, 2 in field of 10-inch wheat in Cloud County; none in 2 fields of 3 to 4-inch wheat in Wabaunsee County. (Bell). Counts per row foot of wheat: up to 6 in 4 fields in Crawford County, up to 30 in 4 fields in Labette County, up to 27 in 4 fields in Montgomery County, and up to 24 in 4 fields in Neosho County. (Redding). NEW MEXICO - Very light on barley at Roswell, Chaves County. (Mathews).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ARIZONA - Averaged 3,500 per 100 sweeps in 3 fields of alfalfa in Yuma Valley, Yuma County. (Ariz. Coop. Sur.). KANSAS - Average counts per 10 sweeps of alfalfa 4-10 inches tall: 10 in field in Riley County; zero in seedling field and 60 in established field in Cloud County; 80 in field in Wabaunsee County; 20 in field in Shawnee County (Bell); and zero in Crawford County field (Redding). WISCONSIN - Averaged 15 per sweep of alfalfa in sandy areas in southern Sauk County. Oviparae 90 percent and alates 5 percent of population. (Wis. Ins. Sur.).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - IOWA - Ear drop survey of 6 fields in Carroll County October 29 showed average of 14 bushels per acre on ground in picked portion of fields and 7 bushels per acre in unpicked portions of same fields. (Iowa Ins. Sur.).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - MISSOURI - Percent infested corn (and percent girdled plants) by county in southeast district: Scott 61.6 (16.8); Dunklin 50.4 (2.4); Mississippi 48.4 (4.0); Stoddard 40.8 (3.2); Pemiscot 29.6 (5.6); New Madrid 23.6 (5.2); Butler 21.6 (2.8); Cape Girardeau 12.4 (6.8). District averages: 36.05 percent infested and 5.85 percent girdled. (Munson).

ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) - DELAWARE - First adults emerging from field-infested corn. (Burbutis, Kelsey).

SMALL GRAINS

APPLE GRAIN APHID (Rhopalosiphum fitchii) - KANSAS - Averaged 38 per square foot in 9-inch volunteer wheat in Riley County, counts in sown wheat zero in fields surveyed in Clay, Washington, Cloud, and Wabaunsee Counties. (Bell).

ENGLISH GRAIN APHID (Macrosiphum avenae) - WISCONSIN - Light, 5 per 100 sweeps of rye; alates 30 percent and all apterous and alate forms viviparae. (Wis. Ins. Sur.).

TARNISHED PLANT BUG (Lygus lineolaris) - MISSISSIPPI - Adults 1 per 100 sweeps of Oktibbeha County oats. (Sartor).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Moderate to heavy in several fields of barley in Comanche County. (Okla. Coop. Sur.).

TURF, PASTURES, RANGELAND

A CYDNID BUG (Sehirus cinctus albonotatus) - OREGON - Adult swept from bitterbrush Purshia tridentata at Roxy Ann Butte, Jackson County, June 24, 1970, by R.L. Westcott and B. Brown. Determined by R.L. Westcott. Additional records from Jackson County: Talent, April 2, 1938, by L.G. Gentner; near Central Point late July 1970 on rose. This is a new State record. (Westcott).

A WHITEFLY (Aleurocybotus occiduus) - ARIZONA - Buildup heavy in Bermuda grass seed fields at Yuma, Yuma County. Controls applied. (Ariz. Coop. Sur.).

FORAGE LEGUMES

GREEN CLOVERWORM (Plathypena scabra) - KANSAS - Average count per 10 sweeps as follows: 4 in field of 7-inch red clover and 0.3 in field of 7-inch alfalfa in Shawnee County, and 1 in field of 5-inch seedling alfalfa in Cloud County. (Bell).

BEEET ARMYWORM (Spodoptera exigua) - ARIZONA - Larvae averaged 30 per 100 sweeps of alfalfa in Gila and Yuma Valley fields, Yuma County. (Ariz. Coop. Sur.).

CLOVER ROOT CURCULIO (Sitona hispidulus) - KANSAS - Average counts per 10 sweeps as follows: 8 in field of 8-inch alfalfa in Wabaunsee County, 0.3 in field of 7-inch alfalfa and 20.5 in field of 7-inch red clover in Shawnee County, zero in field in Riley County, and zero in 2 fields in Clay County. (Bell). WISCONSIN - Adults averaged 3 per sweep in northern Dane and southern Columbia County alfalfa and 3 per 50 sweeps in southern Dane County. (Wis. Ins. Sur.).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - KANSAS - Adults averaged 3 per 10 sweeps in field of 8-inch alfalfa in Wabaunsee County, and 4.7 in field of 7-inch alfalfa in Shawnee County. (Bell).

RICE STINK BUG (Oebalus pugnax) - KANSAS - One adult found while sweeping alfalfa in Shawnee County. (Bell).

YELLOW CLOVER APHID (Therioaphis trifolii) - KANSAS - Averaged 19.5 per 10 sweeps in field of 7-inch red clover in Shawnee County. (Bell).

PEA APHID (Acyrtosiphon pisum) - WISCONSIN - Ranged 15-35 per sweep of alfalfa in Dane and Columbia Counties. Nymphs more numerous in Columbia County than in Dane County. Nymphs 28 percent, apterous reproducers 30 percent, and 19 percent contained parasite larvae. Viviparous alates 16 percent; wing pads on 23 percent. (Wis. Ins. Sur.).

SOYBEANS

BEEET ARMYWORM (Spodoptera exigua) - NORTH CAROLINA - Larvae collected from soybeans during August 1970 in Robeson County by T. Player. Determined by D. Stephan. This is a new State record. (Hunt).

CONCHUELA (Chlorochroa ligata) - OKLAHOMA - Moderate, mostly large nymphs, in late soybeans in McCurtain County. (Okla. Coop. Sur.).

COLE CROPS

IMPORTED CABBAGEWORM (Pieris rapae) - ALABAMA - Larvae of P. rapae, Trichoplusia ni (cabbage looper), Plutella xylostella (diamondback moth), and Evergestis rimosalis (cross-striped cabbageworm) still on commercial and garden plantings of cabbage and collards statewide. Damaging in Elmore and Mobile Counties. Recent rains prevented regular control in Elmore County and damage increased. (Morris et al.).

GENERAL VEGETABLES

ASPARAGUS APHID (Brachycolus asparagi) - NEW YORK - Specimen found on asparagus at New City, Rockland County, August 14, by Carolyn Klass. Determined by M.D. Leonard, confirmed by L.M. Russell. First record of this species on asparagus in New York. This is a new county record. (Leonard).

SALT-MARSH CATERPILLAR (Estigmene acrea) - ARIZONA - Aluminum barriers placed around some lettuce fields in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.).

DECIDUOUS FRUITS AND NUTS

SAN JOSE SCALE (Quadraspidiotus perniciosus) - MARYLAND - Heavy on 600 acres of apples at Hancock, Washington County. Will require controls this winter. (U. Md., Ent. Dept.). CALIFORNIA - Heavy on apple trees at Ojai, Ventura County. (Cal. Coop. Rpt.).

GIANT BARK APHID (Longistigma caryae) - MISSISSIPPI - Light on Pike County pecans. (Sartor).

CITRUS

Citrus Insect Situation in Florida - End of October - CITRUS RUST MITE (Phyllo-coptruta oleivora) infested 86 (norm 70) percent of groves; economic in 69 (norm 49) percent. Population on leaves and fruit highest for October in 19 years of record. Decrease from present high level expected at mid-November. All districts high. CITRUS RED MITE (Panonychus citri) in 29 (norm 28) percent of groves; economic in 8 (norm 7) percent. Near normal and in low range. Little change expected. Highest districts west and central. TEXAS CITRUS MITE (Eutetranychus banksi) in 25 (norm 23) percent of groves; economic in 12 (norm 7) percent. Near normal abundance and at low level. Slight increase expected. Highest district central. GLOVER SCALE (Lepidosaphes gloverii) in 67 (norm 62) percent of groves; economic in 6 (norm 9) percent. Near average and will remain in moderate range despite slight increase. Highest district north. PURPLE SCALE (L. beckii) in 62 (norm 56) percent of groves; economic in 2 (norm 3) percent. Will continue light to moderate. Highest district north. BLACK SCALE (Saissetia oleae) in 47 (norm 32) percent of groves; economic in 16 (norm 10) percent. Will be above normal but mostly in low range. Slight increase expected until cold weather occurs. Only highest district, central, is likely to have noteworthy infestations. YELLOW SCALE (Aonidiella citrina) in 41 (norm 55) percent of groves; none economic (norm 9 percent). Will remain light in all districts. CHAFF SCALE (Parlatoria pergandii) in 37 (norm 41) percent of groves; none economic (norm 4 percent). Only light infestations expected in any district. An ARMORED SCALE (Unaspis citri) in 25 percent of groves; moderate or heavy in 15 percent. Highest on record for October but less than in September. Increase expected in November if mild weather continues. WHITEFLIES in 89 (norm 66) percent of groves; economic in 18 (norm 12) percent. Still above normal and in high range. Recent downward trend expected to lower population to moderate level in November. Highest districts east and north. (W.A. Simanton (Citrus Expt. Sta., Lake Alfred)).

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Counts 100 per lemon on trees at Willows, Glenn County. (Cal. Coop. Rpt.).

ORNAMENTALS

A MEALYBUG (Pseudococcus microcirculus) - CALIFORNIA - Heavy on cattleya orchids in orchid house at Santa Cruz, Santa Cruz County. (Cal. Coop. Rpt.).

IVY APHID (Aphis hederæ) - OKLAHOMA - Increased, 700-800 per terminal common on English ivy in Payne County since mid-October. (Okla. Coop. Sur.).

FULLER ROSE WEEVIL (Pantomorus cervinus) - CALIFORNIA - Adults averaged 3 per sweep on pyracantha shrubs at Hardwick, Kings County, and 1 per leaf on geraniums at Madera, Madera County. (Cal. Coop. Rpt.).

FOREST AND SHADE TREES

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - LOUISIANA - Larvae 324 per square foot of bark surface during July in Kisatchie National Forest. Increased in Caldwell, east Winn, and north La Salle Parishes. Control by salvage continuing. (La. For. Com.). MISSISSIPPI - Population previously endemic for several years. July surveys indicated heavy brood densities. Potential for severe timber loss in Homochitto National Forest. NORTH CAROLINA - Scattered areas of increased activity; general decline in most areas. TENNESSEE - Survey during August showed large number of infested trees per thousand acres of host type in Cherokee National Forest. Salvage underway. Light in other areas surveyed. (South. For. Pest Rptr., Oct.).

BLACK TURPENTINE BEETLE (Dendroctonus terebrans) - MISSISSIPPI - Much damage in areas affected by Hurricane Camille, especially in coastal suburbs where heavy equipment removed debris. LOUISIANA - Heavy in large pole-sized loblolly pine in Catahoula District. (South. For. Pest Rptr., Oct.). SOUTH CAROLINA - Heavy infestation on 96,000-acre Sandhills State Forest, spots ranged 2-500 trees. (S.C. Com. For.).

SPRUCE BUD SCALE (Physokermes piceae) - OREGON - Infested twigs of Engelmann and blue spruce trees in park at Ashland, Jackson County, in May 1970. Adults numerous under bud scales; blackened honeydew covered needles. (Berry). Collected by R.L. Westcott June 25, 1970. Confirmed by R.F. Wilkey. This is a new State record. (Westcott).

HEMLOCK LOOPER (Lambdina fiscellaria) - WEST VIRGINIA - Defoliation 80-90 percent on 20 hemlocks in Marion County October 2. (W. Va. Ins. Sur.).

A WEEVIL (Rhyncolus spretus) - OREGON - Adults collected from dead portion of trunk of living Pacific dogwood tree (Cornus nuttallii) at Mehama, Marion County, by R.L. Westcott March 23, 1970. Determined by R.E. Warner. This is a new State and Pacific Northwest record. Species previously only recorded from northwestern British Columbia in the Northwest. (Westcott).

BRONZE BIRCH BORER (Agrilus anxius) - MINNESOTA - Infested 197 of 12,000 nursery birch trees, improvement over past few years. Controls improving. (Minn. Pest Rpt.).

VARIABLE OAK LEAF CATERPILLAR (Heterocampa manteo) - ARKANSAS - Larvae, mainly this species, secondarily H. guttivitta (saddled prominent), and other species, defoliated 2.5 million acres of hardwood. About 1.5 million acres had moderate to heavy defoliation. Oaks most heavily defoliated. Some defoliation occurred in spring, but defoliation heavier in fall. (Ark. For. Com.).

POPLAR PETIOLE GALL APHID (Pemphigus populitransversus) - CALIFORNIA - Infested native poplar trees in 200-acre stand at Bonsall, San Diego County. Galls averaged 50 or more per limb on scattered trees at San Luis Rey Golf Course. (Cal. Coop. Rpt.).

COWPEA APHID (Aphis craccivora) - CALIFORNIA - Averaged 500 aphids per pod on silk-oak trees at Chowchilla, Madera County. (Cal. Coop. Rpt.).

MAN AND ANIMALS

SCREW-WORM (Cochliomyia hominivorax) - Total of 3 cases reported in U.S. November 1-7 as follows: TEXAS - Jim Hogg, Terrell, Val Verde. Total of 212 cases reported in portion of Barrier Zone in Republic of Mexico as follows: Sonora 135, Chihuahua 47, Coahuila 3, Nuevo Leon 7, Tamaulipas 20. Total of 45 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screw-worm flies released: Texas 24,648,000; Arizona 570,000; California 400,000; Mexico 84,240,000. (Anim. Health Div.).

HORN FLY (Haematobia irritans) - ALABAMA - Adults 1-15 per animal on beef and dairy cattle in many herds past 21 days in Mobile, Baldwin, Monroe, Butler, Crenshaw, Macon, Elmore, Coosa, Cleburne, Clay, and Cherokee Counties. (McQueen).

HOG LOUSE (Haematopinus suis) - MISSISSIPPI - Less than 1 adult behind each ear on 30 hogs in Oktibbeha County. (Sartor).

WESTERN BLOODSUCKING CONENOSE (Triatoma protracta) - UTAH - Bit several members of sleeping family at Andersons Junction, Washington County. Two children became unconscious while others had rapid heartbeat. (Huber, Roberts, Oct. 27).

TICK SURVEILLANCE - Survey throughout the U.S. is to show seasonal distribution of potential vectors and hosts of livestock diseases, and to detect exotic species. These were some of the more interesting determinations for October: Boophilus annulatus (cattle tick) TEXAS - bovine. Otobius megnini (ear tick) TEXAS - bovine; OREGON - feline; COLORADO - equine; HAWAII - bovine. Ixodes scapularis (black-legged tick) ARKANSAS - bovine. Amblyomma cajennense (Cayenne tick) TEXAS - bovine. (Anim. Health Div.).

STORED PRODUCTS

A PYRALID MOTH (Aglossa pinguinalis) - OREGON - Three adults reared from trash collected under loading ramp of feed mill on outskirts of Hermiston (locally called Feedville), Umatilla County, by K. Gray. Composed of broken grain and chaff, trash collected May 13, 1968. Two adults known to have emerged May 22 and 28. Determined by D.C. Ferguson. Origin of material harboring larvae of A. pinguinalis not determined. This is a new State record. (Gray).

BENEFICIAL INSECTS

LADY BEETLES - KANSAS - Still light on alfalfa and red clover in east-central district. Averages per 10 sweeps of 7-inch red clover in Shawnee County field: Hippodamia convergens (convergent lady beetle) 4, Coleomegilla maculata and Cycloneda sp. l. (Bell).

LACEWINGS - KANSAS - Averages per 10 sweeps by county: Wabaunsee - Chrysopa spp. adults 5 and brown lacewing adults 0.5 in 8-inch alfalfa; Shawnee - Chrysopa spp. adults 1 and larvae 1, and brown lacewings 1 in 7-inch red clover. (Bell).

HETEROPTEROUS PREDATORS - KANSAS - Averages per 10 sweeps by county: Wabaunsee - Nabis spp. 3 in field of 8-inch alfalfa; Shawnee - Nabis spp. and big-eyed bugs 2 per 10 sweeps in field of 7-inch red clover; and Cloud - Nabis spp. and Orius insidiosus 1 in field of 10-inch alfalfa. (Bell).

AN ENCARTID WASP (Holcencyrtus physokermis) - OREGON - Adults collected and reared from Physokermes piceae (spruce bud scale) infesting Engelmann and blue spruce in park at Ashland, Jackson County. Collected by R.L. Westcott June 25, 1970. Determined by B.D. Burks. This is a new State record. (Westcott).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS MS

RED-LEGGED GRASSHOPPER (Melanoplus femurrubrum) - WISCONSIN - Still noticeable on alfalfa but steadily decreasing. (Wis. Ins. Sur.).

PINK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Sterile moth releases of 5,503,448 (88,623,330 to date) October 30 to November 5 at Bakersfield, Kern County. No native moths or additional larvae recovered in county. ARIZONA - Sterile release of 67,500 (1,754,800 to date) in field at Redington, Pima County. Five native moths trapped in Redington field for total of 60. Infested 16.6 percent of bolls. (PPD). Averaged up to 4 larvae per young top crop boll at Aztec, Yuma County. Fields untreated. (Ariz. Coop. Sur.). NEW MEXICO - Increased in green bolls in many cotton fields near Texas State line in southern Dona Ana County. (Nielsen, Oct. 30). Heavy in bolls in few southern Dona Ana and Eddy County fields. (Mathews, Riddle).

WHITE-FRINGED BEETLES (Graphognathus spp.) - Following adults collected for new county records. Determined by V.H. Owens; confirmed by R.E. Warner. SOUTH CAROLINA - G. leucoloma fecundus light on road shoulder of farm at Kershaw, Kershaw County. Collected by J.T. Squires October 15, 1970. ARKANSAS - G. peregrinus on pyracantha, azalea, and weeds in yard at El Dorado, Union County. Collected by G. Lee October 19, 1970. (PPD).

HAWAII INSECT REPORT

General Vegetables - All stages of GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) moderate in 2 acres of bittermelon at Pupukea, Oahu. Light in 0.25 acre of bittermelon and in 1.5 acres of eggplant at Haleiwa, Oahu. Heavy in 5,000 square feet of pumpkin at Kahului, Maui. (Miyahira, Kawamura). CARMINE SPIDER MITE (Tetranychus cinnabarinus) light to moderate, averaged 15 per square inch of leaf, in 1.5 acres of eggplant at Haleiwa. Negligible in 0.25 acre of same crop in same area. (Kawamura). BEAN FLY (Melanagromyza phaseoli) heavily infested petioles of backyard snap bean planting at Makawao, Maui; parasites Opius sp. (a braconid) and Halticoptera patellana (a pteromalid wasp) recovered for first time in this area. Moderate in small planting of long beans at Pearl City, Oahu. (Miyahira, Kawamura). SOUTHERN GREEN STINK BUG (Nezara viridula) moderate in backyard snap bean plantings at Kurtistown, Hawaii; 12-15 adults and nymphs per plant. (Yoshioka). BEET ARMYWORM (Spodoptera exigua) moderate in acre of green onion at Waianae, Oahu; infested 30-50 percent of leaves. (Kawamura). GREEN PEACH APHID (Myzus persicae) nymphs and adults moderate, 10-20 per leaf, in 0.25 acre of bell pepper at Kahului, Maui. (Miyahira).

Fruits - BARNACLE SCALE (Ceroplastes cirripediformis) heavy in 60 of 120 acres of passionfruit at Kahului; parasitism poor. (Miyahira).

Forest and Shade Trees - A PSYLLID (Psylla uncatoides) trace on Acacia confusa trees at Nuuanu and Punchbowl, Oahu; averaged one nymph or adult per sweep at both locations. (Kawamura). All stages of GREENHOUSE THRIPS (Heliothrips haemorrhoidalis) heavy on young pines at Waimea, Hawaii; some trees severely affected. (Yoshioka).

Beneficial Insects - Adults of a BRACONID (Apanteles militaris) emerged from cocoons collected at Puu Oo Trail, Kilauea Forest Reserve, Hawaii, 70 miles from original release site. This is a new locality record. Introduced from California to control Pseudaletia unipuncta (armyworm) and released at Parker and Kahua Ranches, Hawaii, in May 1960. (Bianchi).

Miscellaneous Pests - Specimens of a MUSCID FLY (Musca sorbens) collected from Hawaii, Maui, and Molokai for new island records. Previously reported only on Oahu where first specimen taken at Waianae in September 1949. (Ikeda).

DETECTION

New State Records

AN OTITID FLY (Diacrita plana) ARIZONA - Collected around windows of State inspection station at Cameron, Coconino County, by E.S. Seeley during June 1970. Determined by R.H. Foote. (Ariz. Coop. Sur.).

RED-BACKED CUTWORM (Euxoa ochrogaster) CALIFORNIA - One female trapped in light trap in Modoc County 20 miles southwest of Alturas. Collected by R.L. Dalleske August 3, 1970. Identified by W.R. Bauer. (Cal. Coop. Rpt.).

BEET ARMYWORM (Spodoptera exigua) NORTH CAROLINA - Robeson County (p. 772). A CYDNID BUG (Sehirus cinctus albonotatus) OREGON - Jackson County (p. 772). An ENCYRTID WASP (Holcencyrtus physokermis) OREGON - Jackson County (p. 775). A PYRALID MOTH (Aglossa pinguinalis) OREGON - Umatilla County (p. 775). SPRUCE BUD SCALE (Physokermes piceae) OREGON - Jackson County (p. 774). A WEEVIL (Rhyncolus spretus) OREGON - Marion County (p. 774).

New County and Island Records - ASPARAGUS APHID (Brachycolus asparagi) NEW YORK - Rockland (p. 773). A MUSCID FLY (Musca sorbens) HAWAII - Hawaii, Maui, Molokai (p. 776). WHITE-FRINGED BEETLES (Graphognathus spp.) ARKANSAS - G. peregrinus in Union; SOUTH CAROLINA - G. leucoloma fecundus in Kershaw (p. 776).

CORRECTIONS

CEIR 20(45):759 - WALNUT HUSK FLY (Rhagoletis completa) - OREGON - Add "This is a new county record." (Baron).

LIGHT TRAP COLLECTIONS

LIGHT TRAP COLLECTIONS

	Temperature F.	Precip- itation inches	Type of trap	Crops																							
				BL = blacklight I = incandescent O = other	Agrotis ipsilon (black cutworm)	Carpocapsa pomonella (codling moth)	Choristoneura rosaceana (army cutworm)	Estigmene acrea (salt-marsh caterpillar)	Pieris diffusa (wheat head armyworm)	Pelia subteranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, tomato fruitworm)	Loxostege compositalis (alfalfa webworm)	Loxostege sticticalis (garden webworm)	Loxostege alinalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Prodenia ornithogalli (yellow-striped armyworm)	Pseudactinia unipuncta (beet armyworm)	Spodoptera eximia (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Trichoplusia ni (cabbage looper)			
FLORIDA Gainesville 10/30-11/5			BL						3										2	2	1	1					
MISSISSIPPI Stoneville 10/30-11/5	36-74	0.02	2BL	10					9		31								11	22	11	6					
TEXAS Waco 10/31-11/6			BL	3					34		7							12		4	25			1			

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